

Title (en)

ANTENNA MODULE AND ANTENNA DEVICE HAVING THE SAME

Title (de)

ANTENNENMODUL UND ANTENNENVORRICHTUNG, DIE DIESES AUFWEIST

Title (fr)

MODULE D'ANTENNE ET DISPOSITIF D'ANTENNE LA COMPRENANT

Publication

EP 4054001 A1 20220907 (EN)

Application

EP 22158333 A 20220223

Priority

KR 20210026237 A 20210226

Abstract (en)

A 5G NR antenna device. An antenna module (100) includes an antenna material (110) formed of a metal material and having a semi-planar inverted-F antenna (PIFA) structure, and a support (120) formed in the shape of a hexahedron with side and bottom faces that are bent from the antenna material (110) by stamping, wherein the support (120) and the antenna material (110) are formed as an integral body.

IPC 8 full level

H01Q 5/335 (2015.01); **H01Q 5/371** (2015.01); **H01Q 9/04** (2006.01); **H01Q 9/42** (2006.01)

CPC (source: CN EP KR US)

H01Q 1/12 (2013.01 - CN); **H01Q 1/36** (2013.01 - CN); **H01Q 1/38** (2013.01 - KR); **H01Q 1/42** (2013.01 - US); **H01Q 1/46** (2013.01 - KR); **H01Q 1/48** (2013.01 - CN); **H01Q 1/50** (2013.01 - CN); **H01Q 5/335** (2013.01 - EP); **H01Q 5/371** (2013.01 - EP); **H01Q 9/0414** (2013.01 - US); **H01Q 9/0421** (2013.01 - EP KR); **H01Q 9/30** (2013.01 - CN); **H01Q 9/42** (2013.01 - EP)

Citation (search report)

- [XYI] US 2013063318 A1 20130314 - YURUGI HIROYUKI [JP], et al
- [X] WO 2010068002 A2 20100617 - EMW CO LTD [KR], et al
- [X] US 2009278745 A1 20091112 - HUANG LI-JU [TW]
- [X] US 2010127938 A1 20100527 - ALI SHIROOK M [CA], et al
- [XY] US 8179322 B2 20120515 - NISSINEN PERTTI [FI]

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 4054001 A1 20220907; CN 114976594 A 20220830; KR 20220122070 A 20220902; TW 202236737 A 20220916; US 11973277 B2 20240430; US 2022278457 A1 20220901

DOCDB simple family (application)

EP 22158333 A 20220223; CN 202210165339 A 20220223; KR 20210026237 A 20210226; TW 111106500 A 20220223; US 202217677066 A 20220222